

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A storage subsystem which is connected to a host computer through a communication line, comprising
an interface which is used for connecting to said communication line, wherein,
said interface comprises a first filter which judges, on the occasion of having received communication packets from said communication line, whether there is a communication packet with a predetermined format for use in an access to said storage subsystem, among the communication packets;
wherein said interface further comprises;
a second filter which receives the communication packet judged to be for access to said storage subsystem in said first filter, and judges whether the received communication packet is permitted access to a storage area in said storage subsystem and is transmitted from said host computer,
a traffic measuring and judging unit which measures;
traffic of all communication packets received in the interface, [[and]]
traffic of a communication packet judged not to be the packet with said predetermined format in said first filter, and
traffic of a communication packet with said predetermined format judged not to be transmitted from said host computer in said second filter respectively,
wherein said traffic measuring and judging unit uses and by using the three measured [[both]] traffics to judge , judges whether a communication failure is generated or not, and
a communication failure alerting unit which alerts a management server connected to said storage subsystem, wherein the management server comprises a function of displaying information alerted, in case that it is judged that a communication failure is generated in said traffic measuring and judging unit.

2. (Canceled)

3. (Currently amended) The storage subsystem according to Claim 1 ~~[[2]]~~,
wherein,

in case that said host computer is permitted to access ~~[[to]]~~ said storage subsystem, said interface further comprises an access permission table having information which uniquely specifies the host computer, and information which specifies a storage area in said storage subsystem to which the host computer is permitted to access, and

said second filter judges whether the received ~~[[a]]~~ communication packet is permitted to be judged to be for use in said access said storage area and is transmitted from the host computer ~~permitted to access or not~~, in accordance with information stored in said access permission table.

4. (Canceled)

5. (Canceled)

6. (Currently amended) The storage subsystem according to Claim 5, wherein ~~[[,]]~~ said interface further comprises a traffic log recording unit which records, as a traffic log, communication information of a communication packet judged not to be the communication packet with said predetermined format in said first filter, and a communication packet judged not to be the communication packet transmitted from said host computer and judged not to be permitted to access to said storage area in said ~~[[the]]~~ second filter.

7. (Currently amended) A management server connected to the storage subsystem according to Claim 6, further comprising,

an improper communication source analyzing unit which refers to said traffic log, in case that the improper communication source analyzing unit ~~[[it]]~~ is alerted from said communication failure alerting unit of said storage subsystem that a communication failure is generated, and searches a source of said communication packet that causes the communication failure.

8. (Original) The management server according to Claim 7, further comprising,

a relay device control unit which controls, based on information of a source searched in said improper communication source analyzing unit, a relay device which relays communication to said storage subsystem disposed on said communication line so as to cut off communication from the source.

9. (Currently amended) A computer readable storage medium including a program for a computer mounted on a storage subsystem connected to a host computer through a communication line, the program comprising:

code for connecting to said communication line;

code for first judging, on the occasion of having received communication packets from said communication line through connecting to said communication line, whether there is a communication packet with a predetermined format for use in an access to said storage subsystem, among the communication packets;

code for receiving the communication packet judged to be for ~~said~~ access to said storage subsystem ~~in said judging~~, and second judges whether the received communication packet ~~[[it]]~~ is a communication packet permitted ~~[[to]]~~ access to a storage area in said storage subsystem and is transmitted from said host computer ~~or not~~;

code for measuring traffic of all communication packets received in connecting to said communication line, ~~[[and]]~~ traffic of a communication packet judged not to be the packet with said predetermined format in said first judging, and traffic of a communication packet with said predetermined format judged not to be transmitted from said host computer in said second filter; respectively, and by using the both traffics;

code for judging whether a communication failure is generated based on the three measured traffics ~~or not~~; and

code for alerting a management server connected to said storage subsystem and displaying information alerted, in case that it is judged that a communication failure is generated in measuring said traffic of all communications packets received in connecting to said communication line.

10. (Canceled)

11. (Canceled)

12. (Withdrawn) A computer readable storage medium including a program for a computer mounted on a management server which is connected to a storage subsystem, the program comprising:

code for referring to said traffic log, in case that it is alerted from a communication failure alerting unit of said storage subsystem that a communication failure is generated, and searching a source of said communication packet which causes the communication failure.

13. (Withdrawn) A computer readable storage medium including a program for a computer mounted on a management server which is connected to a storage subsystem, the program comprising:

code for referring to said traffic log, in case that it was alerted from a communication failure alerting unit of said storage subsystem that a communication failure is generated, and searching a source of said communication packet which causes the communication failure, and

code for controlling, based on information of a source searched in said searching, a relay device which relays communication to said storage subsystem disposed on said communication line for receiving a communication packet so as to cut off communication from the source.

14. (Canceled)

15. (Currently amended) A storage system in which a storage subsystem, a host computer, and a management server are connected by a communication line, wherein, said storage subsystem comprises an interface which connects to said communication line, and

said interface comprises: [[,]]

a first filter which judges, on the occasion of having received communication packets from said communication line, whether there is a communication packet with a predetermined format for use in an access to said storage subsystem, among the communication packets,

a second filter which receives the communication packet judged to be for ~~said~~ access to said storage subsystem in said first filter, and judges whether the received it ~~is a communication packet~~ is permitted ~~[[to]]~~ access to a storage area in said storage subsystem and is transmitted from said host computer ~~or not~~,

a traffic measuring and judging unit which measures traffic of all communication packets received in the interface, ~~[[and]]~~ traffic of a communication packet judged not to be the packet with said predetermined format in said first filter, and traffic of a communication packet with said predetermined format judged not to be transmitted from said host computer in said second filter respectively, wherein said traffic measuring and judging unit uses ~~and by using~~ the three measured ~~[[both]]~~ traffics to judge ~~, judges~~ whether a communication failure is generated ~~or not~~,

a communication failure alerting unit which alerts said management server, in case that it is judged that a communication failure is generated in said traffic measuring and judging unit, and

a traffic log recording unit which records, as a traffic log, communication information of a communication packet judged not to be the communication packet with said format in said first filter and a communication packet judged not to be the communication packet transmitted from said host computer permitted to access in the second filter, and

said management server comprises:

a display device which displays the alert received from said communication failure alerting unit,

an improper communication source analyzing unit which refers to said traffic log, in case that the improper communication source analyzing unit ~~[[it]]~~ is alerted from said ~~[[a]]~~ communication failure alerting unit of said storage subsystem that a

communication failure is generated, and searches a source of said communication packet which causes the communication failure, and

a relay device control unit which controls, based on information of a source searched in said improper communication source analyzing unit, a relay device which relays communication to said storage subsystem disposed on said communication line so as to cut off communication from the source.

16. (Currently amended) The storage system according to Claim 15, wherein, in case that said host computer is permitted to access ~~[[to]]~~ said storage subsystem, said interface further comprises an access permission table having information which uniquely specifies the host computer, and information which specifies a storage area in said storage subsystem to which the host computer is permitted to access, and

said second filter judges whether the received ~~[[a]]~~ communication packet is permitted to be judged to be for use in said access ~~[[,]]~~ said storage area and is transmitted from the host computer ~~permitted to access or not~~, in accordance with information stored in said access permission table.

17. (Canceled)

18. (Original) The storage system according to Claim 17, wherein, said traffic measuring and judging unit further measures traffic of a communication packet judged to be the communication packet transmitted from said host computer permitted to access in said second filter, and by using the traffic and said traffic of all communication packets, judges whether a value of a ratio of traffic of a communication packet transmitted from said host computer permitted to access to traffic of all communication packets is less than a predetermined value or not, and

said communication failure alerting unit alerts said management server of the alert which indicates that second communication failure is generated, in case that it is judged that the value of the ratio is less than the predetermined value in the traffic measuring and judging unit, and

said management server further comprises a QoS condition designating unit which, in case of having received the alert which indicates that the second communication failure is generated from said communication failure alerting unit, readjusts a network QoS between said storage subsystem and said host computer, which has been set up in advance by an administrator.

19. (Canceled)

20. (Canceled)

21. (Previously presented) The storage subsystem according to Claim 1, wherein a header of the communication packet with the predetermined format includes information which shows that an iSCSI command is encapsulated in the communication packet.

22. (Previously presented) The storage system according to Claim 18, wherein a header of the communication packet with the predetermined format includes information which shows that an iSCSI command is encapsulated in the communication packet.